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ABSTRACT

The definition of economics education, reasons for studying it, ways of integrating it into the K-12 curriculum, approaches to teaching it, and criteria for evaluating it are the foci of this booklet. Economics education is helping young people learn to make economic choices, understand basic economic concepts, and apply important economic goals in their decision making. Students should study economics to develop the critical knowledge and skills they need as citizens to make intelligent decisions and to help shape economic policy. The economic concepts that can be taught at different grade levels are examined. The plan used by Minnesota for integrating economics into the K-12 curriculum is described. Approaches that have been used successfully to teach basic economic concepts, including the use of the local community, videotape/film, television, simulation games, and microcomputers, are described. Criteria that educators can use to assess materials sponsored by corporations, banks, government agencies, public utilities, trade associations, and labor unions are presented. Steps that a school district can take to improve economic education are suggested. The appendix contains listings of economic education organizations and selected teaching materials. (RM)

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Economic Education Across the Curriculum

By Mark C. Schug

Fastback 183

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Introduction

Economic education has come to mean different things to different people. Consider the following examples:

—High School Student: "To me, economic education is deciding whether or not to apply for a part-time job at McDonald's. I need the money but my parents are worried that my grades will slip."

—Businessperson: "Economic education means helping the public understand and appreciate the importance of making a profit, the risks involved in private enterprise, and the problems that result from too much government regulation. People have to realize that it's business that makes this country strong."

—Social Studies Teacher: "Economic education is teaching young people about how to grapple with important economic issues. We need citizens who are well informed about important economic issues such as inflation, unemployment, productivity, and energy."

—Home Economics Teacher: "The economy today has many important influences on individuals and families. Economic education should help students learn personal economic skills such as comparison shopping to help families purchase the best quality merchandise at the lowest possible price."

Students, persons from the business community, and teachers in different disciplines each tend to see economic education differently. The result is confusion about what economic education is, what it isn't, and how it should be approached in the K-12 curriculum. In this fastback I shall try to reduce some of this confusion by addressing the following questions:

What exactly is economic education?

Why study economics?

How should economic education fit into the K-12 curriculum?

What are some promising approaches to teaching economics at various grade levels?

How can sponsored economic teaching materials be evaluated?

What are some current resources for teaching economics at elementary and secondary levels?

What Is Economic Education?

Economic education is more than personal finance wherein students learn how to write checks or fill out tax forms. It is more than having students memorize platitudes about the benefits of the free enterprise system or the dangers of socialism and communism. Instead, economic education is helping young people to learn to make economic choices, to understand basic economic concepts, and to apply important economic goals in their decision making.

Economic Choices

Individuals and society are constantly faced with making economic choices. These decisions are necessary because scarce resources are insufficient to fulfill people's needs and wants. We all face a variety of personal economic decisions. On a personal level, for example, should I take an in-service education course or is my time and money better spent on family activities? Should I purchase a new car or is it wiser to squeeze a few more miles out of the old one? Will the cost of insulating my house be offset by my savings on energy use? These are the types of personal economic choices we all make on an everyday basis.

We also face an array of economic choices at the societal level. As citizens, we realize that our collective wants and needs are considerably greater than our limited resources can provide. For example, should more local tax dollars be devoted to education or is improving crime prevention programs of greater importance? Should federal spending for social programs be reduced in order to balance the budget? Should government increase its regulation of the oil industry or is a laissez faire policy of non-intervention more advantageous for the consumer? Helping citizens learn to make choices about how to use our collective resources is a fundamental aspect of economic education.

Economic Concepts

A second element of economic education is understanding basic economic concepts. There is considerable agreement among prominent economists about what concepts are most important for achieving

a basic grasp of economics. According to the Joint Council on Economic Education, the following are some basic concepts that should receive emphasis at the precollege level:

Economic Wants	Economic Systems
Scarcity and Choices	Interdependence
Productive Resources	Markets
Opportunity Cost and Trade-offs	Supply and Demand
Specialization and the Division of Labor	Prices
	Savings, Investment, Productivity

A brief explanation of these concepts might help to clarify what economics is all about. The most basic economic concepts are wants and scarcity. As individuals and as a society, we have an unlimited number of economic wants. Children have no difficulty expressing to parents their economic wants, ranging from increased weekly allowances to the latest designer jeans. Similarly, families have their economic wants, ranging from necessities such as food, housing, clothing, and health care to luxuries such as lake cabins and exotic vacations. Things are no different at the societal level. From hiring more police to investing in cancer research, we have an unending list of collective economic wants.

While our economic wants seem limitless, our productive resources to meet these wants are scarce. Our labor, natural resources, tools (including machines and factories), and time are all finite. We have to make choices about how best to use our scarce resources. These choices involve recognizing the ideas of opportunity cost and trade-offs. For example, Diane, a high school student, had a choice to make: she had a history exam scheduled for first hour on Tuesday, but her friends wanted her to come with them to the Monday discount night at the movies. Diane wanted to go to the movie but she also felt she should study for the history exam. After some careful thought, Diane decided to trade off her opportunity to go to the movie with her friends in order to study for the history test. Her opportunity cost for studying was the movie with her friends. Consumers, investors, workers, business people, and government officials make choices similar to Diane's every day. The key to making a careful economic choice is knowing what opportunities are given up in any particular situation.

Specialization and division of labor are also important concepts because they represent one way we can be more productive in using our scarce resources. An easy classroom experiment illustrates this simple but powerful idea. Ask students to produce a product such as a greeting card, which involves cutting paper, folding it, drawing a picture on it, and writing "Happy Birthday" on the inside. Have one group of students produce cards by working individually. Have other groups of students produce cards in assembly lines. The usual result is that, per person, the assembly line groups substantially outproduce the individual producers. In other words, the assembly line groups use the same amount of human resources but are able to produce more products. This is an increase in productivity. However, this increased productivity may have some cost. Workers, for example, may tire of doing repetitive tasks and the quality of the product may begin to decline.

Another set of economic concepts involves understanding different types of economic systems. Economists usually identify four:

Traditional: Economic decisions are made based upon past customs.

Command: Economic decisions are made by central authorities.

Market: Economic decisions are made by individual consumers and producers.

Mixed: Economies have more than one of the above characteristics.

Most societies have mixed economies but one type tends to predominate. The United States, for example, is usually considered to be an example of a market economy; i.e., in a competitive market, supply and demand determine the price for goods and services. High prices are signals to producers to increase supplies to make a bigger profit, but consumers might decide to buy less or to substitute cheaper goods. Lower prices are signals to producers to reduce supplies while encouraging consumers to increase consumption. A classroom example might help illustrate these ideas. Some sixth-graders were trying to decide if they should operate a popcorn stand before and after school to raise money for a class trip. They figured it would cost 5¢ to produce one bag. The problem was trying to decide what price to charge for each bag. They figured that at 5¢ a bag they might sell a lot of popcorn

but obviously would not make a profit. They were unwilling to produce popcorn at that price. They considered setting the price at 25¢. At this price, the class was willing to produce a lot of popcorn until someone observed that they probably would sell only a few bags. The decision was made to set the price at 10¢ a bag. If they had popcorn left over, the price would be lowered; if they sold out quickly, the price would be increased. Clearly, this class had learned some of the basic ideas underlying a market economy.

The interaction in the market between producers and consumers also helps illustrate that all the participants in the economy depend on each other. Households depend on businesses for goods and services and for income. Businesses, in turn, depend on households for revenue, labor, and investment. Government depends on both businesses and households as a source of revenue and, in return, provides important services such as military protection, transportation, and education. Understanding this interdependence between households, business, and government is a fundamental part of economic education.

Economic Goals

The final aspect of economic education concerns important economic goals. While the economic concepts presented earlier help to describe how an economic system works, economic goals are the criteria used to make informed decisions about economic policies. One fundamental goal is economic freedom. Americans are usually adamant about their freedom to make individual economic choices. Business firms wish to be free to produce goods and services unfettered by government regulations. Workers wish to be free to decide to join a union or to go on strike. Consumers wish to make their own decisions about how best to use their income. Clearly, economic freedom is an important consideration as individuals make both personal and societal economic decisions.

A second important goal is economic justice. Wealth is not equally distributed in the United States. Changes in economic policy affect different income groups in different ways. Cutting social programs, for example, may help to reduce government spending, but the result is an inequitable burden for lower income groups. As citizens, we need to

evaluate carefully how well local, state, and national policies help to promote economic justice.

A third economic goal is price stability. Even young children are very aware that the prices they and their parents pay at the grocery store, gas pump, and department store have been increasing. Inflation has affected all groups in our society. However, young people today are far less familiar with the idea of severe deflation such as occurred during the 1930s when prices were falling. An important goal of the U.S. economy is to strive for stable prices. Economic policies need to be judged, in part, according to their impact on price stability.

There are several other economic goals that can serve as important criteria for making decisions about economic policies. Efficiency, security, full employment, and economic growth are some examples. The important point is that young people be taught how these goals are affected when dealing with specific personal and societal problems.

Why Study Economics?

Understanding economics is a vital part of citizenship education. Every day citizens are bombarded by the media with complex issues involving supply-side tax cuts, unemployment, prime interest rates, and the consumer price index. Individuals are regularly asked to make decisions about economic policies. Voting on local tax referenda, participating in union meetings, influencing government economic policies through individual and group lobbying efforts are examples of ways citizens are directly involved in shaping public economic policy. Our schools need to provide strong economic education programs to help students develop the critical knowledge and skills they need as citizens to make intelligent decisions and to help shape economic policy.

Economic education can begin with young people by helping them understand better the importance of their own current economic roles. Many young people tend to see their role in the economy as passive; yet, they are already active participants in the community economy in their roles as workers and consumers. Bureau of Census data indicate that about 50% of all high school juniors and seniors, and 30% of all ninth- and tenth-graders are employed on a part-time basis. The number of hours adolescents work is increasing. In 1960, 44% of the 16-year-old males attending high school worked more than 14 hours a week; in 1970, the figure had increased to 56%. In the same period for 16-year-old females, the figure had increased from 34% to 46%. Other, less formal studies also bear out these findings. For example, a 1977 survey of high school students in Rochester, Minnesota, found that over half of the students worked part-time and that most of those worked in the area of

food service. While 60% of workers spent 20 hours or less per week on the job, a core of 10% worked 30 hours or more per week. Not all high school students work at part-time jobs, but nearly all make decisions about whether the costs of part-time employment are greater than the benefits.

Both elementary and secondary students are consumers. The influence of young consumers on the economy can be seen in many ways. Large parts of the clothing, music, toy, food, and movie industries are based on the economic demands of young people. Millions of dollars of television advertising are devoted to influencing how young people's incomes from allowances, household chores, and part-time jobs will be spent. As consumers, young people are regularly making basic economic decisions for which they have received little formal instruction.

In spite of young people's substantial impact on the economy, most surveys show that their level of economic understanding has never been particularly high. The Joint Council on Economic Education notes that in a test of 15,000 junior high students, only 23% could correctly identify a simple description of a capitalistic system.

Economics and the K-12 Curriculum

A 1981 survey by the research firm of Yankelovich, Skelly, and White suggests that the status of economic education in the schools is improving. Twelve years ago, 24% of high school students took economics as a separate course or as part of another subject. Today, half the nation's schools require that all students take some type of economics prior to graduating from high school and two-thirds report that economics is available at grades 6 and 7. Teachers report a substantial increase in the number of students enrolling in economics courses, with 87% of junior and senior high students taking a course with economics subject matter. In addition, it appears that teachers are becoming better prepared to teach economics. Because of extensive teacher education programs, over 80% of teachers in grades 7-12 report having some training in economics. However, a study completed at the University of Wisconsin-Milwaukee found that 44% of inservice elementary teachers and 60% of preservice elementary teachers have had no formal training in economics.

The heightened interest in economic education has caused schools to move in a variety of directions. Currently, 23 states mandate some form of economic education. Some states, such as Idaho and Illinois, have required high school consumer economics courses. Other states, such as Arizona, Delaware, and Virginia, have mandated that "free enterprise" units or courses be taught. Still others, such as Kansas and Vermont, have recommended that the teaching of economics be integrated into the existing K-12 curriculum.

A comprehensive economic education program needs more than a

requirement that all students complete a prescribed economics unit or course. The approach recommended here is that each school district find ways to integrate economics into its K-12 program. This enables students to learn a variety of economic concepts at different levels of complexity and at several specific points in the curriculum. While this approach requires a substantial commitment of time and resources, it will be most effective in improving students' levels of economic understanding.

Elementary Grades

The elementary grades are widely perceived as the appropriate starting point for introducing economic concepts into the curriculum. Several studies completed over the last 20 years confirm that elementary children are able to learn some economic concepts. More recent studies have focused on how children reason about basic economic concepts. While more research is necessary, there is evidence that children's economic reasoning emerges in a stage-related fashion similar to Jean Piaget's stages of cognitive development. This finding has important implications for teaching economics at the elementary grades.

Economic education in the elementary curriculum should focus on the many concrete and immediate economic experiences that children have in their role as consumers. In a class discussion, children can be asked to list some of the things they would like to purchase. Pets, toys, books, clothes, piano lessons, and "Big Macs" are examples of the things students usually suggest. The children then discuss why they want so many things and what prevents them from getting all they want. In the discussion, the teacher helps the students understand that most individuals have unlimited wants, but usually limited resources make it impossible for individuals to get all the things they want; therefore, they need to learn how to make careful decisions about how they will use their scarce resources.

Teaching about the family is a common theme in the elementary grades and provides another concrete way to illustrate basic economic concepts. Using brief family case studies in class discussions, children can see that family members usually work to earn income, which is used to buy the things the family needs. Because income is limited,

families have to make careful choices about the needs that must be met immediately and those that can wait. By discussing the alternative ways that families can use their income, the students become acquainted with the idea of making trade-offs between alternatives. For example, the real cost of taking the family out to dinner might be a new winter coat for one of the children.

Teaching economics in the elementary grades is not tied to one area of the curriculum. Stories in reading books and language arts texts frequently use economic-related topics. Economic-concept words such as scarcity, trade-offs, goods, services, taxes, and income can be the basis for important vocabulary exercises. Children at higher grade levels can begin doing charting and graphing to illustrate the principles of supply and demand and to reinforce basic mathematics skills.

Middle Grades

Some recent research suggests that the intermediate or middle grades may be the most appropriate place to emphasize basic economic concepts. One study on the development of economic thinking suggested that children at these grade levels have sufficient personal economic experiences such as spending allowances, doing household jobs, and participating in family discussions about economic problems to enable them to grasp basic economic ideas quickly.

Concepts related to production are particularly appropriate in the middle grades because they can be taught in a concrete manner, yet be challenging and motivating for many students. For example, one Wisconsin teacher involves her class every year in manufacturing and marketing a product for other students in their school. The incentive for the students is their desire to make a profit, which is usually used to finance a class activity such as a spring picnic or a special field trip. First, the class decides what product they would like to produce. Stuffed animals, school pennants, or greeting cards are often suggested. Next, the class conducts a market survey of other students to determine potential demand for the product; decides on the resources it will need to produce the product; borrows money from the school principal at a set interest rate to purchase the necessary resources; organizes into assembly lines to manufacture the product; develops a marketing strategy to

advertise and sell the product; and, finally, does the necessary bookkeeping to repay the principal and calculate the profits or losses. Clearly, such an activity teaches and reinforces skills and knowledge from many disciplines. Some of the economic concepts learned from this project include productivity, division of labor, specialization, demand, supply, capital, resources, consumer, and profit.

Frequently, the upper elementary social studies curriculum includes a study of state history. This concept provides many opportunities within the existing curriculum to strengthen the teaching of economics. For example, the Rochester (Minnesota) Public Schools and the Minnesota State Council on Economic Education recently completed a curriculum package entitled "Minnesotans Makin' Money." Historical economic development, economic interdependence, agribusiness, and international trade are concepts emphasized in the program, which was designed to complement other new curriculum materials about the study of Minnesota in grades 4-6. Similar curriculum efforts in other states could be undertaken to strengthen the teaching of economics in the existing social studies program.

Junior/Senior High Grades

The upper grades of the K-12 curriculum are where teaching of economics has had the most attention. Business education, social studies, home economics, mathematics, and environmental studies are some of the curriculum areas that stress economics in varying degrees. The problem at these grade levels is not in finding a place for teaching economics in the curriculum but rather in coordinating the program to insure that all students are enrolled in one or more of the programs where economics is emphasized.

Most encouraging at the junior and senior high levels are efforts to develop interdisciplinary approaches to the teaching of economics. For example, the National Science Teachers Association has prepared interdisciplinary materials for teaching about energy in cooperation with the U.S. Department of Energy. In one lesson, mathematics students in grades 8 and 9 are involved in studying the circle graphs in Figure 1 in order to answer the questions that accompany them. This activity uses content from U.S. history to reinforce graph reading skills,

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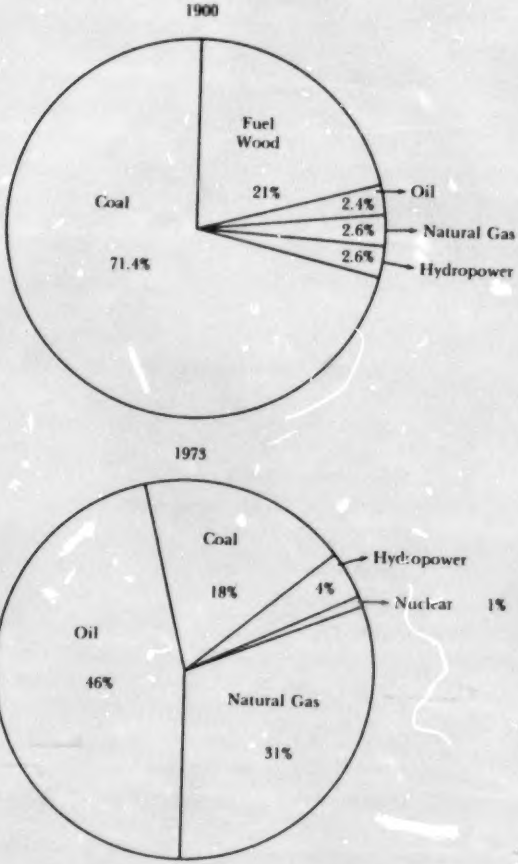
Figure 1: SOURCES OF ENERGY



a. In 1900 which source of fuel was used most?
b. What source of fuel was used in 1900 but not in 1973?
c. What source of fuel was used in 1973 but not in 1900?
d. In your opinion, why was more natural gas used in 1973 than in 1900?

to help students see shifts in energy demand, and to infer the role played by technology in developing new energy sources.

Integrating Economics K-12: The Minnesota Approach

Earlier I made the point that integrating economics into the existing curriculum requires a commitment of time and resources. Educators in Minnesota accepted this commitment and have developed a strong economic education program. From 1978 to 1980, the Minnesota State Department of Education and the University of Minnesota Center for Economic Education developed a program for implementing economics into the existing K-12 curriculum. The program was piloted in three school districts and is now being distributed for use throughout the state. The following steps, based on the Minnesota approach, might be adapted to fit the needs of other school districts:

1. Designate a person in the local schools who is primarily responsible for coordinating the economic education curriculum project. A curriculum coordinator, principal, or teacher may have the responsibility of project coordinator, depending upon local school district organization and personal interests. Some released time should be provided for the coordinator to devote to the project.

2. Establish a local district economic education task force. Teachers from business, home economics, social studies, and other disciplines should be represented on the committee, as well as members of community groups and students.

3. Activities of the project coordinator and the task force should include the following:

   a. Involve appropriate teachers in identifying goals and objectives for the local district. Several states, including Minnesota, Oregon, and Florida, have developed comprehensive lists of goals and objectives. The *Master Curriculum Guide for the Nation's Schools, Part I: A Framework for Teaching Economics: Basic Concepts* published by the Joint Council on Economic Education is another useful resource in developing goals and objectives (see Appendix).

   b. Assess students' current knowledge of economic concepts by administering an economic test(s) to a sample of students.

Local assessment is important because data from national surveys on levels of economic understanding do not necessarily apply to local students. To assist the task force in evaluating the assessment data, have teachers and appropriate others set student performance expectations for each test item by establishing both the minimum and desired percentage of students who will answer each item correctly. Useful tests for assessment purposes include the *Basic Economics Test* (grades 4-6), *Test of Economic Literacy* (grades 4-6), *Test of Economic Literacy* (grades 11-12), *Test of Understanding Personal Economics* (grades 9-12), all published with interpretative manuals and norming data by the Joint Council on Economic Education. National Assessment of Education Progress is another source of test items for measuring economics understanding and money management skills.

c. Use the list of goals and objectives and data from the assessment of economic knowledge to identify areas in the local curriculum where instructional changes may be necessary. If this review indicates students are already knowledgeable about economic concepts, then ways should be discussed to encourage and support existing activities.

4. If program changes are found to be necessary, then the task force should consider doing the following:

a. Identify, review, and evaluate curriculum materials that support the recommended changes.

b. Decide whether new student curriculum materials, including materials on the local economic community, need to be developed to meet the identified goals and objectives.

c. If necessary, seek time and funding for the development of new curriculum materials for local needs.

d. Decide whether additional inservice education is necessary to facilitate the recommended program changes. Build in time for teacher inservice programs and identify the human and instructional resources that exist locally that can be used in this training.

e. Establish a committee of appropriate teachers to design a plan

to implement the proposed changes with the local teaching staff.

f. Design an evaluation plan to determine the effectiveness of the changes made in the school program.

Economic education today can no longer be restricted to a separate course for students in grades 11 and 12. Many school districts are taking steps to integrate the teaching of economics across the K-12 curriculum. The model suggested here is one approach among many that can be used successfully to improve the economic understanding of our young people.

Promising Approaches to Teaching Economics

The previous chapter describes how economics can be integrated into the K-12 curriculum and suggests some important steps to follow in systematic curriculum planning. This chapter provides some specific approaches that have been used successfully to teach basic economic concepts across the curriculum. Whenever possible, research findings are included to assist educators in evaluating these approaches.

Focus on Economic Roles

Since an increasing number of high school students already participate in the local economy as part-time workers and since nearly all elementary and secondary students participate as consumers, one beginning approach to teaching economics is to focus on the economic roles of young people. Concentrating on the immediate economic experiences of young people provides many concrete examples of basic economic concepts. Key questions might include the following: What areas of the local economy benefit from the spending of young people? How do young people make decisions about how to use their income? Why do some students choose to seek part-time employment while others do not? What trade-offs are involved in making decisions about working? How is the contribution of part-time workers important to the local economy?

Here are some specific classroom learning activities that can be used to address these questions.

- Ask students to write down anonymously how much money they spend per week and what they purchase. Tabulate the results and discuss how young people influence the local economy as consumers.

Identify what businesses specifically depend upon income from young people.

- Conduct a poll of high school students asking questions about how many students work, for how many hours, and at what types of jobs. Have students chart the information, then follow up with a discussion of young people's contribution to the local economy.
- Develop and conduct consumer tests of products purchased by young people from local retailers.
- Conduct a class discussion on why some high school students choose to work and others do not.
- Conduct a price comparison survey of products purchased by young people and discuss why prices may vary according to the quality and packaging of the product or with the marketing strategy of the retailer.
- Train students to do participant observation while working at part-time jobs to identify how their employer functions as an economic organization.
- Arrange for a guest speaker from a firm that employs young people or that is a popular place for students to spend their income. Ask the speaker to discuss how young people make contributions to the local economy.
- Simulate the purchase of a product of interest to the class. Ask the students to identify alternative brands, to gather information about the product, to identify their motivation in purchasing a particular brand, and to state what criteria they use in evaluating the alternative brands.

Using the Local Community

The local community is a valuable resource for teaching economic concepts. It provides concrete examples for teaching abstract concepts; it can be a microcosm of the broader economy; and it can involve students in the economic community life.

By using the community as a source of content, teachers can develop curriculum materials based on local issues, topics, or problems for use by elementary or secondary students. When students identify community problems, analyze data from local sources, study alternatives facing the community, and consider their own goals in relationship to

the problems under study, they can make decisions and take action on these decisions that directly or indirectly influence the economic life of the community. Local newspapers and other published documents, case studies of industries, and community resource people are all useful sources in developing curriculum materials for teachers and students. Some topics for study might include local unemployment, pollution, economic growth, government regulation, organized labor, energy use, changing family roles, taxation, and international relations that affect the local community.

A second approach to using the local community is providing opportunities for students to become directly involved in the community within the context of existing courses. A community involvement component makes economic education more relevant by using real-life situations to reinforce economic knowledge and to teach problem-solving skills. Following are some suggestions for teaching economics through student community participation.

- Interview workers at unemployment or human services offices about local economic problems.
- Develop a local consumer price index to measure inflation by plotting prices of basic products over a six-month period.
- Interview local leaders and business people about collective bargaining issues.
- Interview bankers, real estate people, or stockbrokers about savings and investment.
- Establish an economic enterprise such as manufacturing and selling products or providing community services.
- Interview employers who hire a lot of students about the operations of their businesses.
- Develop land-use maps to identify the relationship between resources, transportation, and the location of industrial and commercial firms.
- Invite business people at multinational corporations in the community to serve as guest speakers to discuss economic interdependence.
- Have student teams produce videotape documentaries about community economic problems.
- Arrange for field trips to a local bank, factory, or human services

agency to learn how these institutions contribute to the local economy.

- Involve students in community service projects such as conducting energy use surveys or distributing student-developed materials on energy conservation.
- Arrange short- or long-term student internships with local business firms, labor unions, human services offices, or government offices.

While more research should be done on the effectiveness of community-based economic education programs, one study of a program in Rochester, Minnesota, found that twelfth-grade students' economic knowledge did improve as a result of participating in a community-based program. Also, students who participated in the program felt more positive about the importance of youth in the local economy than those students who did not participate.

Concept Lessons for Elementary Grades

The National Center of Economic Education for Children at Lesley College in Cambridge, Massachusetts, offers teachers free subscriptions to a publication called *The Elementary Economist* (see Appendix). This publication provides classroom-tested learning activities designed to teach basic economic concepts and themes. Published four times a year, each edition features learning activities for grades K-2, 3-4, and 5-6. Past issues have dealt with such concepts as scarcity, opportunity cost, specialization, demand, supply, and market prices. An example of one of the learning activities is having students imagine that they have just arrived in the "New World" and will be there one year before another ship arrives. The class is told that they have a limited amount of resources such as food, clothing, protection from intruders, shelter, and tools. Working in small groups, the class decides how they can use these resources to produce goods and services. The students quickly discover problems associated with the concept of scarcity as they realize that their limited resources do not meet all the needs of the "New World" settlers. This activity culminates with a reading about the settlers of Jamestown in 1607 and how they confronted the problem of scarcity.

The Joint Council on Economic Education (JCEE) has published a series of concept lessons for elementary grades as part of its *Master Cur-*

riculum Guide (see Appendix). The primary grades edition presents strategies for teaching a wide array of economic concepts and generalizations including scarcity, opportunity cost, specialization, and money exchange. Among the activities included are class discussions, bulletin boards, role-playing, and an economics version of "Old Maid." The intermediate grades edition presents activities that extend and reinforce many of the concepts introduced in the primary edition and introduces new concepts such as supply, demand, inflation, and monopoly. This intermediate grades edition also contains many suggested teaching activities, with a particularly strong emphasis on simulation games.

The planning and development of the primary and intermediate editions of the JCEE *Master Curriculum Guide* has involved many elementary teachers and economists. The materials have been distributed widely and field-tested. The primary grades edition, for example, was used by over 50 teachers during the development stages.

Videotape/Film

The "Trade-offs" videotape/film series (see Appendix) represents a truly innovative approach for improving the teaching of economics at the intermediate grades (4-7). The "Trade-offs" series, developed jointly by the Agency for Instructional Television, the Canadian Foundation for Economic Education, and the Joint Council on Economic Education, includes 15, 20-minute videotapes or films, each dealing with a specific economic concept. Media Basics, Inc. has also adapted the series for a sound filmstrip package (see Appendix). The visual materials, along with the teacher guide, are designed to help children think through economic problems and thus become more effective decision makers and responsible citizens. The series uses a variety of personal examples to make economic concepts meaningful to elementary students.

The "Trade-offs" series emphasizes such basic economic concepts as making decisions about scarce resources; improving productivity through specialization, division of labor, and investing in capital goods and education; understanding barter and the advantages of a money system; understanding how supply and demand interact to de-

create market prices; and recognizing how problems can occur in unregulated, free market systems. Throughout the series there is strong emphasis on improving students' problem-solving skills.

Developers of the "Trade-offs" series have conducted a considerable amount of research to measure how effective the program actually is. There is substantial evidence that use of the series significantly improves both student knowledge of and attitudes toward economics. Also, teacher inservice training in the use of the series produces further significant gains in student economic knowledge. One study found that the economic knowledge of elementary teachers and their attitudes toward teaching economics improved after they participated in a graduate course focused on the "Trade-offs" series. Finally, there is empirical support for the claim that teachers as well as students find the program appealing. The only complaint about the program is that it may be too difficult for some elementary students; therefore, school districts might wish to make their own decisions about which parts of the series should be used at particular grade levels.

The Joint Council on Economic Education is currently involved in developing a sequel to the "Trade-offs" series entitled "Give & Take." This new 12-part videotape/film series focuses on grades 8-10 with special attention to developing basic consumer skills as well as to teaching economic concepts. Evaluation materials are being developed at the same time to assist educators in assessing this program. For further information on this program contact the Joint Council on Economic Education.

Television

A unique approach to teaching economics has been developed by Prime Time School Television in Chicago in a program called "Television and Economics: From the Medium to the Marketplace" (see Appendix). The premise of this program is that much economics can be taught or reinforced by encouraging students to do some reflective television viewing. TV news broadcasts, documentaries, situation comedies, specials, and commercials are all considered valuable sources of economic information when used in conjunction with classroom instruction.

The program provides detailed lesson plans and spirit masters for use in high school economics, business education, and career education courses. The materials are designed to be integrated into existing courses, but their flexibility allows teachers to use them for only a few class periods or as the basis for an entire unit. A similar program for elementary students is currently being developed.

A typical Prime Time lesson might include the following activities:

1. Students begin by identifying some of the businesses in their community, what products they produce, and what services they provide.

2. The class divides into small groups and selects a local business they wish to study further. Students are encouraged to select a mixture of local, national, and international corporations. The students then make appointments to interview managers in the various firms and use a worksheet to assist them in gathering information. The worksheet includes questions about the historical development of the firm, its public image, its competition, the resources it uses, prices it charges, and its future. Students report their results to the class.

3. Students are asked to watch three evening television news reports and to pay close attention to commercials during their regular television viewing, with emphasis on those products made by firms discussed in class. In class discussion, students consider the following: Why do companies advertise? What do commercials say about products? What programs do different firms sponsor? Is there a pattern?

Evaluation for the Prime Time materials for teaching economics has not been as rigorous as that for the "Trade-offs" series. However, the materials have been field-tested in over 100 economics, social studies, and business classes nationwide and have been found to be useful classroom tools. In addition, a 24-point test of economic knowledge is included to help teachers measure the influence of the program on their students.

Simulation Games and Microcomputers

Simulation games are highly conducive to teaching economic concepts and principles. For example, the "Big Apple" is a popular simulation published by the Joint Council on Economic Education in a

teaching strategies guide, "Basic Business and Consumer Education," which is part of the previously mentioned *Master Curriculum Guide in Economics for the Nation's Schools Part II*. This game involves dividing the class in two groups with half being producers of apples and the other half being purchasers of apples. By going through several rounds of buying and selling, the game illustrates in concrete manner how competition and the laws of supply and demand can influence the price of apples in a market economy. Another popular game is "New City Telephone Company" produced by Simile II (see Appendix). This game involves students as the leaders of the New City Telephone Company. They set goals for the company and make economic decisions such as installing new technology for residential and commercial customers, negotiating wages with employees, improving productivity, and dealing with inflation. The firms that are most successful are those whose decisions best accomplish their identified goals.

Simulation games are available from several sources. *A Guide to Games and Simulations for Teaching Economics* by Cathy R. Wilson and Mark Schug, published by the Joint Council on Economic Education, includes 130 annotated games and simulations. Hundreds of other games are available from commercial publishers, and many teachers design their own.

The advent of the microcomputer is adding new dimensions to teaching economics through electronic simulations. The microcomputer shares many of the good points of regular class simulation games, but brings important new advantages as well.

1. Accessibility: Time-share computer systems pose a variety of practical problems for playing simulations. It is frequently difficult to get "on line" when you want to and to troubleshoot problems as they develop. Microcomputers, on the other hand, are more flexible for regular classroom use. They are available when the teacher needs them, much like a filmstrip projector or movie projector.

2. Motivation: Many educators have testified to the motivational value of microcomputers. Economic concepts, sometimes perceived as abstract and dull, need the motivational advantages computer simulations can bring.

3. Individualized Instruction: Many classroom simulation games

require the students to move together as a group through each round of play. Some students become bored if the pace is too slow or frustrated if the pace is too fast. Microcomputer simulations allow students to move more readily at their own pace.

4. Sophistication: Role-playing or board simulations tend to oversimplify the reality they simulate in order that the game can be played. Microcomputer games permit the use of more sophisticated models, which can be simulated quickly and simply for teachers and students.

5. Random events: Regular simulations cannot randomly vary the events that influence outcomes. Microcomputer simulations can randomly change outcomes, thus simulating chance events in a more realistic way.

A recent example of a microcomputer simulation in economics is the "You're the Banker" game developed by the Federal Reserve Bank of Minneapolis. In this game, students are divided into small groups and take the roles of managers of a community bank. In each round of the game, the "bankers" review the loan applications of several individuals and make decisions about which loans to grant and which to deny. These decisions are typed into a microcomputer, which generates a print-out that gives students information on the solvency of the loans they have made and the financial health of their bank. Random events built into the game assure that a successful loan made by one bank may or may not be successful when made by another bank. This game comes with a teacher guide and a diskette for use on a microcomputer. The game has been field-tested in several classrooms and can be obtained by writing to the Office of Public Information of the Federal Reserve Bank of Minneapolis (see Appendix).

More research is needed on the effectiveness of using games and simulations for teaching economics. There are, however, sufficient studies to indicate that students can learn cognitive information through simulations about as well as they can from other teaching approaches. In addition, simulations often motivate students and provide teachers with greater variety in instruction.

Current Problems

Economic issues are constantly in the news. It is impossible to read

a newspaper or watch a news telecast without confronting current issues that have important economic dimensions. These current issues provide an ideal jumping-off point for teaching economics.

A variety of curriculum materials has been developed to assist teachers in helping students understand current economic problems. The Joint Council on Economic Education has taken the lead in developing such materials. For example, its *Economics-Political Science Series* includes four publications that contain teacher background information on the topic, lesson plans, and student handouts. Topics addressed in this series include tax policy, government regulation, crime, and health care policy. These materials, along with other topical publications, are available from the Joint Council on Economic Education (see Appendix).

The Washington State Council on Economic Education and the Superintendent of Public Instruction of the State of Washington have worked together to develop a curriculum guide called *Energy Trade-Offs in the Market Place*, which is designed to help students learn and apply basic economic concepts to the current issues surrounding the energy controversy. This program includes 15 lessons with student handouts and several excellent visuals. These materials have been field-tested in the state of Washington and have been used by a variety of teachers across the country (see Appendix).

This chapter has presented several approaches to improve the teaching of economics at various grade levels, from using community resources to doing simulations with microcomputers. The challenge now is to find ways to encourage teachers to adapt one or more of these approaches for use in their regular classes.

Using and Evaluating Sponsored Curriculum Materials

Many corporations, banks, government agencies, public utilities, trade associations, and labor unions have taken an active role in economic education. Such organizations have produced a proliferation of print and nonprint curriculum materials, each purporting to teach economics. Amoco, Exxon, Sears, Phillips Petroleum, The Advertising Council, the U.S. Chamber of Commerce, and many others produce a variety of booklets, films, case studies, filmstrips, and teacher guides that deal with basic economic concepts or topics such as energy, the environment, consumer problems, credit, and inflation. The use of such sponsored materials in teaching economics is widespread. This chapter discusses criteria that educators can use to assess the strengths and weaknesses of sponsored materials and programs.

One widely-known sponsored program is Junior Achievement (JA), which now includes several educational programs. The oldest and best known is the JA High School Program. Students meet outside the school day to learn about the economic system by forming companies of 20 students each, selling stock, electing officers, buying raw materials, producing a product or service, and planning marketing strategies. JA reports having 8,783 student companies and 211,214 participants in 1981. Project Business is a second JA program. It is a 9- to 18-week course designed to supplement existing social studies courses by having a business executive work with a classroom teacher for one class period a week. JA reports that 6,500 classes participated in Project Business in 1981. Applied Economics for students in grades 10, 11, and 12 is the most recent JA-sponsored program. At the national

level, JA has committed over two million dollars for a five-year period to develop this 15- to 18-week course, which includes a nine-week version of the JA company experience, three weeks of computer simulations and games, and six weeks of computer economic comparisons and trade-offs involving business, government, and labor. Several school districts will schedule this pilot program in the fall of 1982.

Many firms have taken a sponsorship role in the economic education of teachers through internship programs. Firms in nearly 30 states are now running summer business internship programs for teachers. For example, Rexnord, a Milwaukee-based firm, has worked to promote the concept of teacher internships across the country. In these programs, teachers are paid to work in a local firm in the summer. Teachers apparently are eager to participate in these programs during the summer months, because applications usually exceed the number of available internships.

Teacher summer internships raise a number of questions. Many business leaders often feel that teachers do not really understand what life is like in the business world. Clearly, many firms view business internship programs as a way to promote probusiness attitudes among teachers, which will eventually be reflected in their classroom teaching. However, a common outcome of these programs is reduced stereotyped thinking for both teachers and business people. Teachers begin to understand the risks, complexities, and difficult decisions that business people face. Business people, on the other hand, gain new respect for the talents and abilities of classroom teachers.

Educators, concerned about having a balanced K-12 economics program might well ask whether industry- or labor union-sponsored teaching materials are little more than efforts to promote one economic point of view rather than a balanced presentation of economic issues and controversies. Nevertheless, many teachers welcome these teaching materials. They are usually more up-to-date than textbooks, are free or inexpensive, and often are written and illustrated in ways that are interesting to students. And, it can be argued that even though such materials may teach only one economic point of view, they can be effectively used as case studies to help develop students' critical thinking skills. The use of these materials does more educa-

tional good than harm; nevertheless, teachers do need to be cautious in what materials they use and how they use them.

How can educators judge which sponsored materials may be appropriate for classroom use? What criteria can be used to distinguish materials that are educationally sound from those that are not? The following paragraphs describe seven criteria and their rationale, which can be used to evaluate sponsored materials for teaching economics.

1. Does the material have citizenship education as a primary goal? One dimension of citizenship education is the need to be informed about economic issues and trained in using decision-making skills. Because economic interpretations vary widely, it is also important that students learn and practice critical thinking skills such as distinguishing fact from opinions, distinguishing inference from fact, and identifying opinions, biases, and value judgments.

2. Does the material emphasize basic economic concepts and generalizations such as those in chapter one? Unfortunately, many sponsored materials lack a clear conceptual focus and are often written by individuals who themselves have little or no training in economic education. The best sponsored materials are those that emphasize broad concepts that can be learned and reinforced throughout the K-12 program and that are not subject to short-term changes.

3. Does the material recognize more than one economic interpretation? Some special interest groups defend the free enterprise system as being faultless, while others accuse the economic system of exploitation and domination by "big business." While point-of-view materials are worthwhile for teaching critical thinking skills, the broad context of the K-12 economics program should provide a balanced approach that represents differing viewpoints fairly.

4. Does the material contribute to increasing the quality of instruction? The methods used to teach a subject often determine whether any learning will occur. The materials should encourage variety in instructional methods, including simulations, class discussions, films, transparencies, and role-play activities. In addition, the materials should emphasize important contemporary issues such as inflation, interest rates, or supply-side economics.

5. Have the materials been adequately evaluated? Many sponsored

materials are written and distributed without ever being field-tested and evaluated in the classroom. Clearly, materials that have been field-tested in several classrooms and revised are probably more effective than those that have not. In addition, it is useful to inquire if more elaborate evaluation has been done with the materials, including adequate designs using pre- and post-measures and control groups. These data can help educators know whether the materials are really contributing to students' economic knowledge or attitudes.

6. Does the material serve to enhance local curriculum goals? Obviously materials that run counter to the goals or objectives of the local school district K-12 curriculum should not be used. Teachers need to insure that sponsored materials actively support existing curricular goals.

7. Does the material contain racial or sexual bias? Sponsored materials may be written by individuals outside of education who are not as sensitive to the importance of using nonsexist and nonracist language and to the need to portray a diversity of traditional and emerging lifestyles. Because sponsored materials are not likely to have undergone the vigorous review process that is routine for such educational materials as textbooks, it is of special importance that they be reviewed to check for racial and sexual bias.

Figure 2 is a checklist that was developed as a simple way to help educators assess the strengths and weaknesses of sponsored materials for teaching economics. The previously described criteria are presented in the form of 10 statements. To use this instrument, simply read each statement and circle the number on the right that reflects how well a specific piece of curriculum material meets the criterion. With possible total scores ranging from 10 to 50, this will give some indication of the appropriateness of the material.

Figure 2: CHECKLIST FOR EVALUATING SPONSORED MATERIALS IN ECONOMICS

	Never				Always
1. Presents opportunities for students to develop or use critical thinking skills.	1	2	3	4	5
2. Presents opportunities for students to develop or use decision-making skills.	1	2	3	4	5
3. Emphasizes basic economic concepts.	1	2	3	4	5
4. Presents more than one economic point of view.	1	2	3	4	5
5. Focuses on relevant economic issues such as inflation or unemployment.	1	2	3	4	5
6. Encourages a variety of teaching techniques.	1	2	3	4	5
7. Has been field-tested by classroom teachers and students.	1	2	3	4	5
8. Has been evaluated with adequate research design.	1	2	3	4	5
9. Meets local curricular goals.	1	2	3	4	5
10. Uses examples and language that are nonracist and nonsexist.	1	2	3	4	5

Taking the Next Step

The premise of this fastback is that economic education should be a fundamental part of citizenship education. Young people must understand economic concepts, be able to apply their knowledge to current problems, and make informed decisions if they are to be effective citizens. Several teaching approaches and curriculum materials have been suggested, including using community resources, focusing on student economic roles, using films and video tapes, and playing microcomputer simulation games. The approaches suggested here are not exhaustive. Individual teachers and curriculum developers across the country are involved in producing and testing new and exciting ways to teach economics at different grade levels.

What steps can you and your school district take to improve economic education? The following come to mind:

- Help teachers learn about new approaches to teaching economics by providing district inservice activities, encouraging attendance at economic education conferences, and encouraging teachers to take economic education courses.
- Acquaint teachers with existing curriculum materials and economic education organizations. Encourage them to select carefully the curriculum materials they feel best meet the needs of their students.
- Seek support from the local community to teach economics by expanding the use of community resources.
- Encourage teachers to develop and test their own approaches for teaching economics at various grade levels and in different courses.

- Establish a district teaching awards program, a mini-grant program, or a released-time program as incentives for teachers to get involved in teaching economics.
- Support research and evaluation activities in your school to insure that particular programs are actually achieving their stated goals.
- Initiate a K-12 economic education program by adapting the steps listed on pages 19-21 to your local district.

Appendix

Economic Education Organizations

Canadian Foundation for Economic Education
252 Bloor Street West
Suite S 560
Toronto, Ontario
Canada, M5S 1V5

Provides teaching resources, publications, and a newsletter on the Canadian economy.

Federal Reserve System
Board of Governors
Publications Services
Washington, DC 20551

Publishes a variety of topical economic materials including films, filmstrips, and teaching materials from member banks.

Joint Council on Economic Education
1212 Avenue of the Americas
New York, NY 10036

Provides a wide variety of materials including curriculum guides, filmstrips, tests, catalogs, and a research journal, and is involved in many special projects. A "Checklist" is published annually listing the available materials. The JCEE has 49 state affiliated councils and over 220 centers for economic education.

National Center of Economic Education for Children
Lesley College
Cambridge, MA 02238

Publishes *The Elementary Economist* four times a year and is developing curriculum for teaching economics in the elementary grades.

Social Science Education Consortium, Inc.
855 Broadway
Boulder, CO 80302

Publishes a bibliography of resources for teaching economics in K-12 including textbooks, filmstrips, simulations, and cassettes.

Social Studies School Service
10000 Culver Blvd.
Culver City, CA 90230

Provides a catalog of commercially available teaching aids including filmstrips, simulation games, books, spirit master books, and bulletin board displays. Publishes a special catalog for consumer education and economics.

Selected Teaching Materials

Addison-Wesley Publishing Co.
South Street
Reading, MA 08167

Hodgetts & Smart, *Fundamentals of the American Free Enterprise System* (1978): textbook, grades 10-12.

Clawson, *Our Economy: How It Works* (1979): textbook, grades 8-12.

Agency for Instructional Television
Box A
Bloomington, IN 47402

Trade-offs (1978): film, videotape series, grades 4-7.

Allyn & Bacon, Inc.
470 Atlantic Ave.
Boston, MA 02210

Wolf, *Managing Your Money* (1977): textbook, grades 9-12.

Bell Telephone
(available through local education representative)

New City Telephone Company Simulation Game (1974): role-play simulation game.

Federal Reserve Bank of Minneapolis
Office of Public Information
250 Marquette Avenue South
Minneapolis, MN 55480

Money, Banking, and the Federal Reserve: Instructional Unit (1979): teacher's guide and student materials.

You're the Banker (1981): computer simulation, grades 9-12.

Glencoe Publishing Co., Inc.
17337 Ventura Boulevard
Encino, CA 91316

Hopkins et al., *General Business in Our Modern Society* (1979): textbook, grades 9-12.

Joint Council on Economic Education
1212 Avenue of the Americas
New York, NY 10036

Economics-Political Science Series (1977-1981): Resource guides are available on the following topics: crime, health care, government regulation, and tax policy.

Master Curriculum Guide in Economics for the Nation's Schools, Part I: A Framework for Teaching Economics: Basic Concepts (1977): description of basic economic concepts for pre-college level.

Master Curriculum Guide in Economics for the Nation's Schools, Part II: Strategies for Teaching Economics (1977-1981): This is a series of curriculum materials for the following areas: primary level (1-3), intermediate level (4-6), basic business and consumer education (secondary), United States history (secondary), world studies (secondary), junior high school level (7-9).

McGraw-Hill Book Co.
Princeton Road
Hightstown, NJ 08520

Jelley & Herman, *The American Consumer* (1978): textbook, grades 10-12.

Media Basics, Inc.
Larchmont Plaza, Inc.
Larchmont, NY 10538

Trade-offs (1979): sound filmstrip series, grades 4-7.

Charles Merrill Publishing Co.
1300 Alum Creek Drive
Columbus, OH 43216

Brown et al., *Economics: Principles and Practices* (1979): textbook, grades 10-12.

National Center of Economic Education for Children
Lesley College
Cambridge, MA 02238

The Elementary Economist (published 3-4 times a year): economic concepts lessons.

Prime Time School Television
40 East Huron
Chicago, IL 60603

Television & Economics: From Media to the Marketplace (1978): spirit masters and teacher guide, grades 9-12. (Information about the forthcoming elementary school economics program can be obtained by contacting Prime Time School Television.)

Rochester Public Schools
Curriculum Office
Coffman Building
Rochester, MN 55901

Minnesotans Makin' Money (1981): teacher's guide and student reading, grades 4-6.

Science Research Associates, Inc.
155 Wacker Drive
Chicago, IL 60606

Watson, *Economics: Meeting People's Needs* (1979): textbook, grades 9-12.

U.S. Department of Energy
Technical Information Center
P.O. Box 62
Oak Ridge, TN 37830

Interdisciplinary Student/Teacher Materials in Energy, the Environment, and the Economy (1979): This is a K-12 curriculum on energy education with some emphasis on economics.

Washington State Council on Economic Education
1904 3rd Avenue 1014
Seattle, WA 98101

Energy Trade-Offs in the Marketplace (1980): teacher guide and student materials, grades 9-12.

Key References in Economic Education

Economic Education: Links to the Social Studies, Bulletin 65. Arlington, Va.: National Council for the Social Studies, 1981.

National Survey of Economics Education. Yankelovich, Skelly, and White, Inc., 1981. (Copies available free from Playback Associates, 708 Third Avenue, New York, NY 10017.)

Westworth, D. R. et al., eds. *Perspectives on Economic Education*. New York: Joint Council on Economic Education, 1977.